Parameter Overview

March 3, 2020

Introduction

This file contains the parameters we tuned for each specific algorithm.
All parameters, which we changed from the default values, are listed.

The provided datasets (rosbags) can be downloaded here:

Scenario_1

Scenario_2

The necessary transformations from camera image / camera imu to robot base are provided via broad.py.

For more information: README

Method	Parameters	Values
RGBDOdometry	MaxDepth	15
	MinDepth	0.3
	MaxDepthDiff	0.05
	MaxPointsPart	0.05
DVO	coarsest_level	5
	finest_level	1
	max_iterations	300
	influence_function	2
	influence_function_param	30
	use_weighting	true
	scale_estimator_param	1
	precision	0.00005
Fovis	fast_threshold	15
	max_pyramid_level	4
	fast_threshold_adaptive_gain	0.005
	feature_window_size	10
ICPOdometry	MaxDepth	15
	MinDepth	0.3
	MaxDepthDiff	0.25
	MaxPointsPart	0.03
RgbdICPOdometry	MaxDepth	5
	MinDepth	0.3
	MaxDepthDiff	0.25
	MaxPointsPart	0.23
CCNY	reg/ICPProbModel/min_correspondences	12
	reg/ICPProbModel/n_nearest_neighbors	20
	reg/ICPProbModel/max_assoc_dist_mah	13
	reg/ICPProbModel/max_corresp_dist_eucl	0.04
DVOSLAM	tracking/coarsest_level	5
	tracking/finest_level	1
	tracking/max_iterations	300
	tracking/scale_estimator_param	1
	tracking/influence_function_param	30
	tracking/mu	0
	tracking/precision	0.0005
	slam/max_rotational_distance	0.3
	slam/min_entropy_ratio	0.3
	slam/constraint_search_radius	0.6
	slam/constraint_min_entropy_ratio_coarse	0.70
	slam/constraint_min_entropy_ratio_fine	0.8
RTABMap	-	-
ORB-SLAM2	Camera.fx	927.7444458007812
	Camera.fy	928.2129516601562
	Camera.cx	655.3325805664062
	Camera.cy	361.226318359375
	Camera.width	1280
	Camera.height	720
	Camera.bf	13.640315374
	ORBextractor.scaleFactor	1.25
	ORBextractor.iniThFAST	20
	ORBextractor.minThFAST	6
	ORBextractor.nLevels	8
	ORBextractor.nFeatures	2500
RGBDSLAMv2	config/nn_distance_ratio	0.5
	config/ransac_iterations	500